

Gold *F. J. H.*
DEPARTMENT OF CITY PLANNING

THE CITY OF NEW YORK

INTERIM REPORT

to the

CITY PLANNING COMMISSION

on

POPULATION HEARINGS

Held by the Commission

on

May 24, June 7 and June 21, 1939



January 30, 1940

DEPARTMENT OF CITY PLANNING
CITY OF NEW YORK
Interim Report on Population Hearings

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This report summarizes the proceedings of the population hearings held by the City Planning Commission on May 24, June 7 and June 21, 1939.* It attempts to highlight the opinions expressed at these hearings regarding the City's population and the factors that appear to govern future growth.

Purpose of Hearings

The purpose of these hearings, as stated by Chairman Tugwell, was "... to find out whether there is general agreement as to what the population is likely to be, and if there is not general agreement, to put the burden of proof on those people who disagree with the consensus of the experts".

The first of these hearings on May 24th dealt with changing population trends for the nation as a whole and with the relationship of the city to the nation. On June 7th and June 21st the discussion was concerned more specifically with population trends in New York City and the surrounding Metropolitan Area.

Appearances

Professor Robert E. Chaddock of Columbia University served as special Chairman of these hearings. The experts invited to discuss the problem and to express their opinions were: Dr. P. K. Whelpton, Central Statistical Board, Bureau of the Budget, Washington, D. C.; Mr. E. P. Goodrich, Consulting Engineer; Professor Willford J. King, Department of Economics and Statistics, New York University; and Dr. Alfred J. Lotka, President of the Population Association of America and Assistant Statistician of the Metropolitan Life Insurance Company.

In addition, representatives of private and public agencies attended the hearings and participated in the discussions: Mr. Thomas J. Duffield, Registrar of Records, Department of Health; Mr. Harold M. Lewis, Chief Engineer and Secretary, Regional Plan Association, Inc.; Mr. H. B. Stryker, Commercial Survey Engineer, New York Telephone Company; Mr. George G. Weinberger, representing the Deputy Superintendent, Board of Education; Dr. Eugene A. Nifenecker, Director of the Bureau of Reference, Research and Statistics, Board of Education; Mr. Avery M. Schermerhorn, Real Estate Agent and Appraiser, Board of Transportation; Mr. Edward M. Law, Assistant Engineer, Department of Law and Real Estate, Board of Transportation; Mr. Walter P. Hedden, Chief, Bureau of Commerce, Port of New York Authority; Dr. J. M. Maller, Teachers' College, Columbia University; Mr. L. P. Wood, Chief Engineer's Staff, Board of Water Supply; and Mr. Walter E. Nutt.

Dr. Leon E. Truesdell, Chief of the Population Division, U. S. Bureau of the Census and Dr. Frank Lorimer, the American University, Washington, D. C., were invited to participate but were unable to attend.

THE CITY'S FUTURE POPULATION

The evidence presented at these hearings revealed the importance of population trends and population predictions in guiding policies and decisions of the various city

* This report was prepared prior to the enumeration of population under the Federal Census of 1940. The techniques and assumptions, and the resulting forecasts presented by the several experts, as well as the Department's estimate of net migration into New York City, will be compared with the 1940 Census returns when data are available. The Census may be expected to reveal trends that will have a direct bearing upon such hypotheses and methods as may be hereafter employed to estimate the probable future population.

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agencies and departments. The different agencies emphasized those aspects of the population which bear directly on the types of problems they must handle. The Board of Education, for example, is primarily interested in the age composition and distribution of the population, whereas the Board of Water Supply is more concerned with the total of persons living in the city. Their common need and interest is to secure more accurate estimates of future changes in the population.

Factors of Growth

The speakers at these hearings generally agreed that the optimistic expectations of the 20's—that the city would continue to grow at a fairly rapid rate—are not likely to be realized. The decline in birth rates for the country as a whole as well as for this city during the last decade, the almost complete cessation of foreign immigration, and for New York City, a considerable diminution in migration from the rest of the nation into the city, have caused a marked downward revision in population estimates for the future.

Population Predictions

The several population predictions indicate that New York will continue to grow but at a decreasing rate, that a point in time will be reached when the city will cease to grow, and that this maximum will be followed by an actual shrinkage in the city's population. While this represents the general position taken by all of the participating consultants, their population estimates are not identical. The points of agreement and disagreement and the reasons for these differences are summarized below, together with other evidence presented at the hearings.

CHART I — POPULATION ESTIMATES FOR NEW YORK CITY
As Presented at Public Hearings Held by the City Planning Commission in 1939

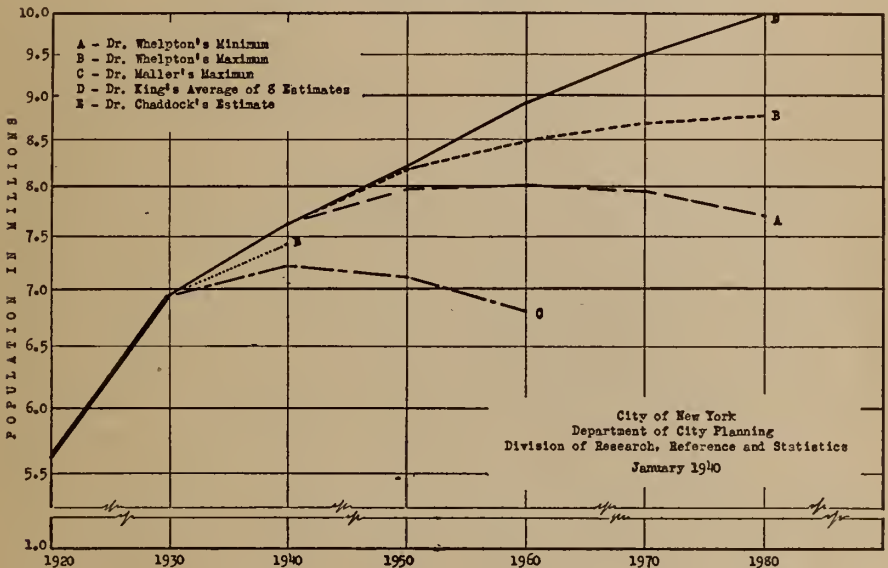


Table I shows some of the population estimates submitted to the City Planning Commission. Chart I is a graphic representation of the same data.

Table I: Estimates of the Population of New York City
(in thousands)

| Year | Whelpton's Minimum | Whelpton's Maximum | Maller's Maximum | King's Average of 8 Estimates | Chaddock | Board of Water Sup. |
|-----------|--------------------|--------------------|------------------|-------------------------------|----------|---------------------|
| 1940..... | 7574 | 7613 | 7200 | 7600 | 7400 | 7652 |
| 1950..... | 7963 | 8165 | 7100 | 8200 | | |
| 1960..... | 8045 | 8479 | 6800 | 8900 | | |
| 1970..... | 7950 | 8680 | | 9500 | | |
| 1980..... | 7694 | 8786 | | 10000 | | |

All of the estimates for 1940 show a gain over 1930 with the exception of Dr. Maller's minimum estimate of 6.6 millions, which is approximately 300,000 lower than the population in 1930. Dr. Whelpton's minimum estimate shows an increase though at a decreasing rate until 1960 followed by a decline. Professor King's figures, the highest of the group, show an uninterrupted upward movement in population until 1980. The same is true of Dr. Whelpton's maximum estimate although his figures are considerably lower than those submitted by Professor King. Dr. Maller's estimates are the lowest of the group. According to his data, the peak in the city's population will be reached in 1940, which is 20 years earlier than Dr. Whelpton's minimum estimate and 40 years earlier than his maximum estimate and Professor King's average of eight estimates.

Dr. Whelpton's estimates of the population for the entire Metropolitan Area, as well as for New York City proper, are of interest. These figures are presented in Table II. For purposes of comparison, the table includes the census counts for 1900, 1910, 1920 and 1930.

Table II: Population of New York City and the
Metropolitan Area. 1900-1980
(in thousands)

| Year | New York City | *Metropolitan Area | % City of Metropolitan Area |
|-----------|---------------|--------------------|-----------------------------|
| 1900..... | 3,437 | 4,608 | 74.5 |
| 1910..... | 4,767 | 6,475 | 73.6 |
| 1920..... | 5,620 | 7,910 | 71.0 |
| 1930..... | 6,930 | 10,910 | 63.5 |
| 1940..... | (1)7,574 | (1)12,191 | 62.1 |
| 1950..... | (1)7,963 | (1)12,920 | 61.6 |
| 1960..... | (1)8,045 | (1)13,122 | 61.3 |
| 1970..... | (1)7,950 | (1)13,026 | 61.0 |
| 1980..... | (1)7,694 | (1)12,606 | 61.0 |

* "Metropolitan Area" as defined by the Census Bureau.

(1) Whelpton's minimum estimate. The ratio of New York City to the Metropolitan Area is the same in Dr. Whelpton's minimum and maximum estimates.

It will be observed that while New York City has accounted for the major part of the population in the Metropolitan Area, its prominent position has undergone considerable alteration since 1900. In 1900 the city's population was approximately three-fourths of the population of the Metropolitan Area, but by 1930 this proportion was reduced to less than two-thirds, a decline of 11 per cent. It is worth noting that the greater part of this change took place between 1920 and 1930.

Dr. Whelpton's figures indicate that New York City, while continuing to grow until 1960, will contain an ever smaller proportion of the population in the Metropolitan Area. This decline, however, is assumed to be very small—less than 1 per cent per decade after 1930. The prognosis seems to favor New York since the city's relative share of the entire area declined about 1 per cent in the first decade of the century and considerably more in the second and third decades. By 1970, Dr. Whelpton's figures indicate that a point of stability will be reached whereby the city's population will be fixed at 61 per cent of the population of the Metropolitan Area.

The reasons for the disagreement among the experts' population estimates were questioned by the City Planning Commission. The discussion revealed that these variations were due to the different assumptions made with regard to the four basic determinants of population changes—fertility and mortality rates and trends in foreign immigration and internal migration. The experts agreed that predictions concerning trends in mortality and fertility rates can be made with greater certainty than is the case for foreign immigration and migration within the country. The statements made by Dr. Whelpton and Dr. Lotka on the nature of past and probable future trends in mortality and fertility are quoted below.

Dr. Whelpton stated:

"In general, there has been an increase in the expectation of life due largely to the decline of infant mortality, so that at the present time, the expectation of life of the white population is somewhere in the neighborhood of 62 or 63 years.

Considering past trends, our assumptions for the future have been that we could expect an increase in the expectation of life to at least 67 years for the white population; that we have a good chance of getting an increase to 70 years . . . and, that if we are extremely fortunate in the future developments in the fields of medicine and public health, it may be possible to increase the expectation of life to 73 years. The difference in the population by 1980 resulting from the following of one of these trends rather than the other, is comparatively small. Much more important is what happens with regard to immigration and fertility."

With regard to the trends in fertility, the experts generally agreed that the rapid decline in birth rates in the past would slow up sharply in the future. Dr. Whelpton's maximum fertility estimate assumes a maintenance of the present birth rate. His minimum estimate involves the assumption of a constant diminution in the average size of the family. "Instead of the average white woman living through child-bearing having 2.3 children, as in recent years, she may have as few as 1.9. The lowest assumption we have made is that this average will get down to 1.5 children per white woman."

Dr. Lotka pointed out that the decline in birth rates in New York City was even more rapid than that for the country as a whole. He emphasized the critical importance of this trend on the size of future generations. To quote Dr. Lotka:

"In the City of New York, this trend has reached a considerably more advanced stage. One hundred new born girls in the course of life, according to present conditions, have only 72 daughters, thus falling far short of reproducing their own numbers. . . .

" . . . How serious such a situation as that for New York City would be if indefinitely continued and if not compensated for by migration, is seen when we consider the next generation, the grand-daughters. A little simple arithmetic shows that, according to (prevailing) conditions, the 100 new born girls would have just about 50 grand-daughters, so that in the course of but two generations their progeny would have been reduced to one-half their original numbers."

Major Growth Factors

While declining birth and death rates affect the size of future populations, all speakers emphasized the fact that the major stimulus to the city's growth in the past came from foreign immigration and from internal migration. Declining fertility and mortality rates will tend to alter the age distribution of the city's population. Mr. Duffield of the Board of Health pointed to the increase in the older age groups and to the decline in the number of younger persons. It is expected that this skewness of the age distribution will increase in the future. Dr. Nifenecker of the Board of Education stated that this shift has already caused a shrinkage in the number of children attending elementary schools. The effect on the total school population has been partially offset by the increasing registration of students in the higher grades.

It is difficult to predict the size of future populations since the major growth factors—migration and immigration—are affected by numerous complex and constantly changing social and economic conditions. Dr. Truesdell of the U. S. Bureau of the Census, in a communication to the City Planning Commission, emphasized the need for careful investigation of this problem. He wrote, in part:

"It is apparent . . . that New York City will grow primarily by migration from other areas. It would seem, consequently, that even for satisfactory year-to-year estimates, it would be necessary to establish some dependable annual local statistics on which such estimates could be based. The problem of long-range forecasts is even more difficult, and would require very careful and detailed study of all factors likely to have any effect on migration to the City.

"In any case, I should judge that it would be unwise, since the 1940 Census is so near at hand, to base any important decision on forecasts made without its assistance. I say this in particular because the decade just drawing to a close is so far from normal in many respects that it is hardly safe to assume that conditions prevailing in previous decades will continue either at similar rates or at these rates scaled in proportion to the slowing down of the population growth in the country as a whole; or even to assume very positively that the changes will be in the same direction as in earlier decades."

Dr. Whelpton, no doubt for reasons similar to those reflected in Dr. Truesdell's letter, did not attempt a detailed analysis of migration trends. For the purpose of his study Dr. Whelpton assumed "that the City of New York would have the same propor-

tion of New York State's urban population in the future as it had in 1930 and that the Metropolitan Area would have the same proportion of the urban population of New York State and New Jersey as it had in 1930."

The future urban population of New York State is based on the assumption that

"in the future such areas would continue to draw the same proportion of the net out-movement of the surplus-producing areas in the future as they have in the past. That is, we divided the country into the two types of areas, those producing an excess of births over deaths and 'exporting' people, and the 'importing' areas drawing on the former. We assumed that the ratio of the export to the excess of births over deaths in the first areas would remain as in 1920 and 1930 and that the total amount of population exported from these areas would be divided among the importing areas in the same proportion as it was in the 1920 to 1930 decade."

Dr. Whelpton stated that this was "an optimistic assumption for the importing areas and especially for New York City." However, no other data on migration were presented to the Commission at these hearings. The experts were of the opinion that until more is known about the nature and extent of population movements in and out of this city, population forecasts are necessarily subject to a considerable margin of error.

Population Distribution in the City

The second general topic discussed at the Population Hearings dealt with the problems created by the shifting or relocation of the population within the city. At the present time there are no accurate statistics which show the periodic redistributions of people among the different boroughs and within individual boroughs. The importance of population shifts, however, is clearly recognized by the various city agencies. Such relocations cause major alterations in property values, loss in public improvements and demand for new services such as streets, schools, rapid transit facilities, and water supply.

Mr. Stryker of the New York Telephone Company suggested a method for obtaining information on intra-city movements of the population. He proposed that "certificates of occupancy" be issued whenever a person moved into an apartment, rooming house, or private residence. In this way, the city would have a current register of all transfers taking place within the city.

Mr. Law of the Board of Transportation discussed the relationship of rapid transit facilities and population density. By the use of a series of charts he showed that the bulk of the city's population is concentrated within a half-mile zone of the rapid transit lines. In order to relieve transportation congestion and to provide for a more economic and socially desirable distribution of the population, Mr. Law suggested that "we should . . . (plan) crosstown and circumferential lines at intervals of about every three miles."

Mr. Law also argued that transit lines have caused an appreciation of land values and that the resulting increase in taxable returns would be sufficient to cover construction costs. He stated in part: "The construction of rapid transit lines in the outer sections has caused an increase in assessed valuation within the half mile belt, as I have estimated, year by year, of \$7,000,000 per square mile per year above what would have been the increase had the line not been constructed . . . the taxable return would be more than sufficient to pay for the construction of these new lines."

Mr. Law admitted that there has been a corresponding depreciation in land valuation in certain parts of the city, but it was his belief that ". . . compensating increases have been produced in the outer areas to more than make up for the decrease in these older sections."

A great variety of charted data was displayed by Dr. Maller of Teachers' College to illustrate certain economic and social characteristics of New York City's population. The data indicated that the resident population is highly mobile although there are significant variations among different neighborhoods. It was also shown that a considerable amount of time is consumed by the working population in getting from their residences to places of employment, for example, more than 90 per cent of the working population living in upper Manhattan require more than 20 minutes to travel to their places of business. Dr. Maller also illustrated the extent to which neighborhoods differ with respect to infant mortality, juvenile delinquency rates, average rentals and predominant nationalities.

Daytime Population

Another aspect of population mobility was discussed by Mr. Walter P. Hedden of the Port of New York Authority. Table III following, submitted by Mr. Hedden, con-

tains estimates of the night population and the daytime food consuming population in New York City and the Metropolitan District. In commenting on these data, Mr. Hedden stated that "while the figures are not absolutely complete from all sectors, we believe that at the present time there is a daily flow of over a half million persons into the City of New York from points in New Jersey, Westchester, Rockland County, New York and Long Island—all points beyond the city limits but in the Metropolitan region".

The difference between the size of the day and night populations, especially in Manhattan, creates major problems in connection with transportation facilities, provision of food stuffs and traffic regulations. Although the large daily inflow is evidence that the city continues to be the center for economic and social activity, it is also true, Mr. Hedden believes, "... that the territory embraced in the New York Metropolitan Area outside of the city is gaining more rapidly than the population in the city itself".

Table III: Estimated Geographical Distribution of the Food Consuming Population and of Food Sales in the New York Metropolitan District.
(Prepared by Port of New York Authority)

| | Estimated Night Time Population | | Daytime Food Consuming Population | | Retail Food Sales via Stores Eating Places and Hotels | |
|---|---------------------------------|--------|-----------------------------------|--------|---|--------|
| | 1,000's | % | 1,000's | % | 1,000's | % |
| | (a) | | (b) | | (c) | |
| A New Jersey, West of Passaic River— | | | | | | |
| Passaic | 300 | 2.69 | 315 | 2.50 | \$ 40,842 | 2.45 |
| Essex | 1,013 | 8.24 | 963 | 7.65 | 121,083 | 7.26 |
| Union | 407 | 3.31 | 387 | 3.07 | 43,679 | 2.62 |
| B New Jersey, between Passaic and Hudson River— | | | | | | |
| Rockland (N. Y.) | 63 | 0.51 | 63 | 0.50 | 7,984 | 0.48 |
| Bergen | 534 | 4.35 | 504 | 4.00 | 45,052 | 2.70 |
| Hudson | 725 | 5.90 | 690 | 5.48 | 85,383 | 5.12 |
| C New York, between Hudson and East Rivers— | | | | | | |
| Westchester | 673 | 5.48 | 493 | 3.92 | 74,417 | 4.46 |
| Bronx | 1,625 | 13.22 | 1,205 | 9.57 | 175,850 | 10.54 |
| Manhattan | 1,815 | 14.77 | 3,615 | 28.72 | 479,325 | 28.74 |
| Richmond | 200 | 1.63 | 180 | 1.42 | 22,138 | 1.32 |
| D New York, East of East River— | | | | | | |
| Kings | 2,857 | 23.25 | 2,422 | 19.24 | 321,251 | 19.26 |
| Queens | 1,390 | 11.31 | 1,190 | 9.45 | 170,359 | 10.21 |
| Nassau | 446 | 3.63 | 371 | 2.95 | 54,363 | 3.26 |
| Suffolk | 211 | 1.71 | 191 | 1.52 | 26,329 | 1.58 |
| Grand total | 12,289 | 100.00 | 12,589 | 100.00 | \$1,668,055 | 100.00 |
| Area A | 1,750 | 14.24 | 1,665 | 13.23 | \$205,604 | 12.33 |
| Area B | 1,322 | 10.76 | 1,257 | 9.98 | 138,419 | 8.30 |
| Area C | 4,313 | 35.10 | 5,493 | 43.63 | 751,730 | 45.06 |
| Area D | 4,904 | 39.90 | 4,174 | 33.16 | 572,302 | 34.31 |
| Grand total | 12,289 | 100.00 | 12,589 | 100.00 | \$1,668,055 | 100.00 |

(a) Source: Information Bulletin No. 40, January 24, 1938, Regional Plan Association, 400 Madison avenue, New York City.

(b) Source: According to Information Bulletin No. 11, January 30, 1933, Regional Plan Association, close to 3,000,000 people enter Manhattan from the suburbs. These were considered the equivalent of 1,500,000 food consuming persons; were added to Manhattan night time population and deducted from those of counties in which they reside. Also 300,000 persons, considered the day time transient resident population on Manhattan from beyond the Metropolitan District, were added to the Manhattan population.

(c) Source: U.S.D.C.—Bureau of Census—Retail Distribution Census for 1935.

Population Research

Following these population hearings, the Division of Research, Reference and Statistics of the Department of City Planning undertook the development of methods for determining net migration into New York City. Estimates were first prepared for the decennial periods 1900-1930 on the basis of reported births and deaths, and of State of birth obtained from census reports. For the intercensal years, net migration was estimated on the hypothesis that numerical changes in the total population are reflected in elementary and junior high school registration, taking into account the declining birth and death rates of this age group.

Several of the experts who appeared at the hearings have commented on these estimates. With these valuable suggestions, and the comparisons that will be possible when the 1940 census data are available, it is hoped that more satisfactory methods of estimating migration in intercensal years may be developed. Such a study will probably lead to consideration of net migration in relation to industrial and commercial conditions and employment opportunities in this city, and in places of origin, to determine whether the attractive power of New York is likely to be stronger or weaker in the future.

